

the efficacy of quinine in pernicious remittent, as well as of the importance of administering it promptly and in large doses, there can scarcely be a question, and where the danger was imminent, I have not hesitated to continue its use even through the exacerbations, as in case No. XI, where the pulse was soft and the reaction imperfect.

In the administration of quinine, I have usually employed the solution, with a few drops of elixir of vitriol, in which form it is, perhaps, most prompt in its operation. The dose was commonly from four to eight grains, repeated according to circumstances. Sometimes given alone, it was at others combined with sweet spirits of nitre and laudanum.

I have already spoken of the efficacy of blisters to the back of the neck in cases where there was great stupor. Their application to the epigastrium also in cases where there is much precordial pain, uneasiness or oppression, or irritability of stomach, accompanied with more or less prostration or coolness of the surface, is a point of practice never to be lost sight of. In the more inflammatory cases, however, they may prove more annoying than useful, and besides, the local abstraction of blood from the epigastrium is here preferable, and generally sufficient.

Having now completed my account of the disease, I will merely observe, in conclusion, that on many points it is much less full and accurate than I could have desired. To have made it more so, however, would have required the sacrifice of a much larger amount of time in recording at the bedside, minute descriptions of symptoms, and that at different periods of the twenty-four hours, than could conveniently be spared from other occupations. Imperfect, however, as it is, I hope that my labour will not have been altogether in vain, and that perhaps I have succeeded in bringing out some features of the affection into stronger relief than had been previously done.

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ART. II.—*Practical Observations on Menorrhagia, with a Report of a Case of this disease connected with Malposition of the Uterus, and adhesion of its Cervix and Os Tinceæ to the corresponding portions of the Vagina.* By J. P. METTAUER, M. D., of Virginia.

THERE are two varieties of menorrhagia: the first should be considered as menstruation, preternaturally profuse or immoderate, but not hemorrhagic in its pathological essence; the second, although often commencing with catamenial menstruation, frequently occurs as a well marked hemorrhage, from the beginning, and retains the hemorrhagic characters through its entire course; this modification of it is truly dependent upon a pathological condition of the uterus, and is to be regarded as a diseased or morbid state of the organ.

In the first variety, the constitutional disturbance and local uneasiness are little different, if at all so, from the ordinary concomitants of catamenial menstruation; in the second, there is much disturbance of the general system, and in many instances it amounts to a well marked febrile state. The blood discharged in this variety of the disease is quite florid, dense, sizy, displaying but little serum when it coagulates, and easily and rapidly coagulates; and the quantity effused will necessarily vary with different individuals who are the subjects of the disease.

Sanguine constitutions, with more or less nervous mobility, are the almost exclusive subjects of the first variety. The vigorous and plethoric are most obnoxious to the last; the liability to this form, however, will be materially influenced by the habits and conditions of society. It has been remarked, that the females of cities are more subject to menorrhagia, than those of the country, and chiefly because the former are more constantly and powerfully exposed to the operation of the physical and moral causes, which predispose to, or tend to superinduce that state of the constitution favouring its occurrence, than the latter. In an especial manner, the luxurious and indolent habits of town life, together with the improprieties of dress, and frequent and early incentives to sexual intercourse, predispose the female system to menorrhagia.

In *treating* menorrhagia, it will always be of the first importance to discriminate carefully between the two forms under which it appears; and the remediate course demanded will be prophylactic and curative.

The milder forms may be prevented by attending early and diligently to the condition of the bowels, and by avoiding the ordinary exciting causes, especially those acting through the nervous system from sudden and violent passions and emotions of the mind. A soluble state of the bowels; a tranquil mind, and a mild and non-stimulating diet, with regular and gentle exercise, and natural sleep, will be found, in a large majority of instances, to answer both as preventive and curative means in this form of menorrhagia. Occasionally it will be necessary to let blood from the arm when the pulse is excited and strong, and to cup the lower part of the spine. Sometimes it will be required to resort to the internal use of astringents, especially the sugar of lead, and sup. sulph. alum, and to ice as a refrigerant; and finally, anodynes will be needed to tranquillize the nervous system, and to procure sleep in certain cases distinguished by much nervousness. In the more violent forms of the disease, the prophylactic suggestions already submitted will be equally applicable. It will be necessary, generally, in this form, to urge the measures with more energy. A state of absolute rest should be rigidly enforced; the bowels to be maintained equably and regularly soluble; the mind to be tranquillized; the pulse to be bled down if too strong and active, and the diet to be mild, non-stimulating, and taken in small quantity at a time. Being hemorrhagic in its nature, the course just indicated should be commenced with the earliest dawnings of the disease, more especially

that part embracing the measures for quietude, soluble bowels, and bleeding, to prevent, as far as possible, the accession of the disease; or to weaken and modify the actions upon which it depends, should it take place. In many instances we have succeeded in preventing an attack by placing patients quietly in bed, regulating their bowels, and confining them at the same time to a spare, mild, and non-stimulating diet. The abstraction of blood from the arm, should generally form a part of the prophylactic treatment if the habit is plethoric, and the pulse decidedly vigorous and strong. Spinal cupping will also exert the most gratifying effects, used wet or dry, as a prophylactic measure, and should be employed, especially if much uneasiness is experienced about the lower spine, or through the region of the uterus. To be effectual, this remedy must be energetically used and repeated until it decidedly impresses the parts affected with pain by relieving them. Should thirst be present, pounded ice, or cold water may be allowed; the former will be found highly beneficial if sensations of internal heat, or a general elevation of the animal temperature occur. Occasionally it will be necessary, in this stage, to employ opium in some form or other, to allay and quiet the nervous agitation produced by alarm, and which sometimes comes on too as an attendant of this disease. It will be important throughout this period, to maintain the spirits cheerful and buoyant, and as far as possible to quiet apprehension.

Should the attack come on, and be marked with symptoms of acuteness, especially of a febrile nature, after placing the patient in as quiet a condition as is consistent with the nature of such cases, the first object is to enfeeble the force of the general circulation by blood-letting; and this remedy should always be decisively used in the early period of the attack before the system has been enfeebled by the hemorrhage, especially if the pulse is vigorous and full, and the habit plethoric. Moderate bleedings will, sometimes, after the loss of much blood from the hemorrhage, greatly influence the uterine actions, and decidedly restrain the menorrhagical flux upon the principle of revulsion. At the same time, it will be necessary to place the patient upon a hard bed, and in a cool, well ventilated, and quiet room. Cool drinks, or pounded ice should be freely allowed. If the temperature of the body is above the natural degree, and the skin dry, cloths, wrung out of iced vinegar and water, may be applied over the inferior portion of the abdomen and vulva, and repeated until the discharge moderates: this remedy should only be resorted to in cases of great and alarming urgency. Throughout the treatment, an open state of the bowels must be maintained, and it can be secured, either by internal cathartic or aperient means, or by enemata.

In most cases, it will be found necessary to employ internal astringents, with a view of producing a constringing or antihemorrhagic state of the uterine vessels, to favour coagulation in the open mouths, or orifices of the vessels, effusing blood from its internal surface. With this intention, the acet. plumb. in solution, may be administered in one, two, three, or even eight

grain doses, should the hemorrhage be very alarming, after intervals of from half an hour to three or four, until the symptoms moderate or abate. Should the lead irritate the stomach or bowels, half a grain of opium, or gum camphor may be united with each dose. If the form of solution, which is always to be preferred by reason of its prompt action upon the stomach, when it does not irritate, is objectionable, the acetate may be administered in the form of pill. With the same intentions the sulphate of alum may be employed internally, and in the same form, and very nearly in like doses. The tannin, or a strong infusion of the unripe fruit of the persimmon (*diospyros Virginiana*), may also be employed as internal astringents in this disease; of the former, from three to four grains every three hours in some liquid vehicle; of the latter, half an ounce of the strong infusion recently prepared, after like intervals. The last named remedy is one of the most valuable vegetable astringents we possess, and we have employed it in practice in various diseases requiring astringents for a number of years with great benefit.

In this stage, much relief will sometimes follow cupping the lower spine, either in the dry or humid way. We may also derive much benefit in some cases from the use of sinapisms to the inferior extremities, especially if the circulation is defective in them. These remedies act upon the principle of counter-irritation, and revulsion from the uterus. Artificial warmth may be applied to them with similar intentions, when the lower extremities are cool, and bloodless.

Injections of iced water, or astringent mixtures and solutions per vaginam, may be very usefully employed, also, in this affection. Sometimes they will very speedily arrest the hemorrhage, especially the iced water, and strong solutions of the sulphate of alum; and should be employed invariably if the flow is profuse. We have in some cases, employed emetics with decided advantage in this disease, and would advise them to be resorted to in those cases connected with torpor of the digestive system. In such examples of menorrhagia they may be used with entire safety, and generally with great advantage in arresting the hemorrhage. These remedies are well adapted to the predisposing stage of menorrhagia also, and if early employed would often prevent an attack of the disease.

In all cases of menorrhagia, after the pulse has been enfeebled, opium will be found of essential benefit; it should be administered at night to promote sleep if there is restlessness or pain; or during the day, if required to tranquillize and lull at that period, and will generally be most safely administered in combination with small portions of ipecacuanha in the form of pill.

The treatment which has been briefly premised, should be varied and modified to suit the peculiar cases demanding the use of remedies. Some will require to be treated energetically, while others will only need gentle medication during the active stages of the hemorrhage. The tampon may be used as a last resort. In the secondary stages, the remedies should

only be designed to equalize and balance the circulatory and secreting organs, chiefly with a view of correcting those fluxionary or congesting tendencies of the actions of the economy from which the menorrhagical state results. With such designs, it will be necessary to maintain a soluble state of the bowels, which will at the same time regulate the actions of the liver. For this purpose, nothing answers better than a combination of aloes, colocynth, jalap, and one grain of ipecacuanha to each dose of the compound; these articles, made into pills of proper strength to act once or twice daily upon the bowels, and taken nightly, or on alternate nights, will be found to answer exceedingly well. Occasionally, castile soap may be united with these pills, or some alkali may be used after meals to correct or prevent acidity, which is so common in such cases. In many cases nothing else will be required: this combination, besides regulating the actions of the bowels and liver in numerous instances, has at the same time restored the healthy functions of the skin and uterus. Should occasional threatenings of menorrhagia, during the menstrual intervals, make their appearance, it will be necessary to employ, during this stage likewise, some astringent. For this purpose, nothing answers better than combinations of the acet. plumb., or sulph. alum and ipecacuanha in minute portions, to be taken two or three times daily, or as often as may be deemed necessary to restrain the menorrhagial irritation of the uterus. Should an anemial condition exist, a state by no means uncommon with females who have experienced frequent attacks of menorrhagia, it will be necessary to employ some of the preparations of iron, and the former must be selected with care, or it may prove pernicious. The phosphate is especially adapted to the highest degree of anemia; and the iron in substance in the form of filings to the lowest, in which some inflammatory tension often exists; the precipitated carbonate is applicable to the grades intermediate. These preparations may be employed in doses more or less active, and they should always be used cautiously. Occasionally the muriated tincture may be beneficially used, and when the biliary system is materially affected, or structural disease of the uterus is suspected to exist, it will be found to answer a most valuable purpose. Throughout this stage the mind should be maintained tranquil, the exercise should be moderate, the hours for sleep should be undisturbed, the diet must be well regulated, and the temperature of the body carefully attended to and regulated by the use of all such means as tend to maintain it equable; it should be preserved as nearly natural as possible. Should there be uneasiness of the loins, it will be highly beneficial to employ cupping to that region, used either in the dry or humid form, especially the former. And much comfort and benefit too may be derived from the application of adhesive plasters to the loins, to be kept on constantly; these often afford much relief; and from seeming to impart strength to the loins, are in popular language termed "strengthening plasters." The cold bath may also be employed in some cases as a valuable auxiliary in the treatment of this

stage; it will be especially adapted to those cases distinguished by a hot and dry skin, and in which there is fever attended with thirst, and a dry mouth and tongue.

There are *examples* of menorrhagia occasionally to be met with, resulting from uterine irritation of a fixed nature, which resist the ordinary methods of treatment, and which, if relieved, must be medicated in reference to the local affection. Of these examples we will instance menorrhagia connected with uterine polypi, and menorrhagia from mal-position and adhesion of the cervix and os tincæ to the corresponding vaginal cavity.

Should polypi exist within the cavity, or on the mouth of this organ, they will tend to impart to menstruation a menorrhagic character, and must be corrected before a cure can be effected. Of this example of menorrhagia we have witnessed one case, which was successfully treated by the removal of the polypus. Of that variety connected with mal-position of the uterus, and adhesion of its cervix and os tincæ to the corresponding portions of the vagina, we have also met with and treated a case, which shall next be reported somewhat in detail as most likely to furnish its true history. Without reverting to the early history of the lady's previous health, which was good, it may be stated, that the menorrhagial attacks followed her last labour, which was an abortion, and it was attended with many untoward circumstances. The hemorrhage, however, from a thorough history of the case, was not, we should suppose, more profuse than usually attends such accidents. The abortion was the consequence of alarm, and was, from unaccountable oversight, succeeded by retention of the secundines and utero-vaginal inflammation, and feverish consequences. The inflammation and fever, from what we learnt of the case, assumed intense and alarming characters, and continued some two or three weeks before it was known that the placenta had not been expelled. It was the discharge of an exceedingly putrid mass from the vagina at this period, which first excited suspicion that the placenta had been retained thus long, and upon examining the matters discharged, it was ascertained that the placenta formed a portion of them. To the presence of these substances in the uterus and vagina was ascribed, and doubtless correctly, the distressing symptoms which followed the abortion. During the period of inflammation, fever, &c., the lady suffered most intensely from utero-vaginal heat; and from the statement made to us by the lady some months after, the discharges from the vagina, which preceded the expulsion of the putrid placenta, must have been unusually fetid and acrid. Very soon after the offensive vaginal discharges commenced, it was to be observed that the mucous lining of the vagina was denuded of its epithelium, and was exceedingly tender; this condition of the vagina continued until the discharge of the putrid placenta took place, and for some weeks after. From some cause not fully explained, the lady confined herself exclusively on the left side in bed, with the lower extremities somewhat drawn up, during her long suffering; and when she had so far recovered her strength

as to be able to sit up, she was unable to place the trunk in an erect posture, either sitting or standing, but was incorrigibly inclined a little to the left and forward, and continued to assume this attitude invariably after the strength had so far returned as to enable her to walk, and even until after her case passed under our treatment.

As soon as the general health had so far recovered as to enable the uterus to resume its functional exercises, it was alarmingly manifest that the cata menial flux very speedily became menorrhagial in its character. The first menstrual period after the abortion and its terrible consequences, although decidedly menorrhagial in the character of the flux by which it was distinguished, passed by with less injury to the lady than might have been expected; nevertheless she was much enfeebled from the loss of blood. After this attack of menorrhagia, each succeeding menstrual period was marked by similar returns of it, only that the discharges increased in quantity, and assumed more and more the characters of uterine hemorrhage. The periods, too, were always preceded by more or less acceleration and force of the pulse, flushing of the cheeks, headache, pain of the loins, hips, and groins, more especially the left; torpor and uneasiness of the bowels, sick stomach, and a peculiar uneasiness of the uterus compounded of pain and "drawing," and inability to sit or stand erect. These symptoms, as is usual with menorrhagia, abated in a great measure with the flow, and soon entirely subsided. The attacks continued for a week, and were always followed by *fluor albus* in distressing degrees.

After many months of suffering and anxiety, and with a constitution which had been originally good, but now nearly wrecked, the lady with great difficulty repaired to our neighbourhood to obtain our advice, after travelling nearly a hundred miles over rough roads, and during an inclement season. She was upon the verge of an attack, and we of course lost no time in examining into the case. Our first impression, before the examination per vaginam, was, that *polypus uteri* existed. This view was soon disproved, and to our utter astonishment it was clearly and fully established by the examination, that the uterus was displaced downwards, backwards, and to the left, and firmly secured in these situations by firm adhesions with the vagina. The inferior of these abnormal connections was of the form of the *frenum linguae*, one was fully an inch in length, and three quarters in width, drawing the *cervix uteri* downwards and backwards more than two inches. The adhesions of the left side were more extensive; they occupied the whole of the left *cervix* and *os tineæ*, drawing and fixing the uterus in that direction more than fifteen lines, and were firm and strong, and the mouth of the womb was rendered permanently dilated by them. Much pain and tenderness were experienced during the examination in attempts to pass the finger between the *vagina* and *cervix*, especially at the terminations of the adhesions. The *frenum* or inferior adhesion, was excessively tender when pressed upon by the finger, and produced, if long pressure was made, sickness of stomach.

During the examination it could be plainly perceived that the adhesions were put upon the stretch when the lower extremities were extended, and the body rendered more straight, and such attempts always produced pain and sickness of stomach. The lady now informed us that she had not been able to stand erect since the abortion, and that when she walked, the person was inclined forward and to the left side invariably, and that all attempts to change her attitude produced pain, and sickness of stomach. Believing the mal-position and adhesions of the uterus exerted considerable influence upon its actions, as it was more or less irritated continually by them, we felt little difficulty in accounting for the menorrhagial characters imparted to the flow at each return of the menstrual efforts, by referring them to increased irritation at those periods in consequence of the natural periodic exaltation of all the vitalities of the uterus, before and during menstruation, especially that connected with sentient life. There is little doubt but the augmented bulk of the uterus at the approach of menstruation, placed the organ more fully under the constraint and irritation of the adhesions, and that the augmented irritation thus produced, operating upon the circulatory organs, transformed the catamenial secretion into hemorrhage. That the adhesions exerted decided influence in the relation of cause and effect, in the recurrence of the menorrhagial attacks, is most conclusively established by the fact, that there never has been a return of hemorrhage since the adhesions were removed.

In correcting or removing the adhesions, some difficulty was experienced as might naturally have been expected. We succeeded, however, without subjecting the lady to very intense suffering, in dissecting through the adhesions, using the three-bladed speculum *vaginae* of Weis to bring the parts into view, and a delicate scalpel supported by a long handle to divide them. To prevent reunion by adhesion the cut surfaces were kept apart, by interposing between them lint and soft old linen. As soon as the operation was completed and the traumatic bleeding ceased, which was very slight, we were gratified to find that the lady could stand perfectly erect, and without pain or uneasiness; and she could also flex the body to the opposite side, which she had not been able to do before since the confinement from the abortion. The incisions were kept freely open by passing the ends of the fingers through them several times daily until they healed over, which was accomplished in about ten days.

To correct the torpid state of the bowels, we employed a pill composed of aloes, jalap, and scammony, taken nightly, or as often as might be needed, with occasional portions of a mixture of aloes and sup. carb. soda, after meals, to prevent acidity. To relieve the spinal uneasiness, as well as to counteract the introverting tendencies of the circulation upon the uterus, wet and dry cupping were used to the loins, hips and sacrum. We employed astringent, injections of sulph. alum. and sacc. saturn. per *vaginam*, to relieve the leucorrhœal state; and finally, after using the nitro-muriatic mixture with a view of improving the appetite, and stimulating the liver to a more healthy action,

we had the satisfaction to see our patient restored to very comfortable health again, which she continues to enjoy now, nearly three years since the case was treated by us.

This was an exceedingly interesting case from its commencement, but especially so after it passed into our hands, as it then enabled us to discover a new cause of menorrhagia, and at the same time indicated and required a peculiar and entirely novel mode of treating this affection. It also points out the necessity of per vaginam examinations, as a diagnostic means in certain cases of monorrhagia which have resisted the ordinary modes of treatment.

That the adhesions and concomitant displacement of the uterus produced the menorrhagia, cannot be questioned; and that these adhesions and the displacement resulted from the excoriations, and the particular position of the body during their continuance and since, is rendered almost equally certain, as they existed precisely where we would suppose the organ rested upon the vaginal surface during that position. The displacement of the uterus downwards, doubtless proceeded from the adhesions occurring between its cervix and os tincæ, while it was prolapsed as the immediate consequence of abortion. And the dilated condition of the mouth of the organ, together with its unevenness and mal-formation in the direction of the adhesions, also resulted from those adhesions forming while the os uteri was expanded as the only consequence of labour, in both cases being incapable, by reason of its fixed position from the adhesions, of changing its location, or the form of its mouth. The mouth of the uterus was open to fully the size of a twenty-five cent piece, but was of very unequal form, and was elongated, as already stated, in the directions of its firm attachments by adhesions to the corresponding portions of the vagina. No force which we were willing to employ by the taxis could vary the form of the os uteri, or change the position of the presenting portion of uterus, so firmly was it fixed and tied down by the adhesions.

The foregoing case furnishes a caution to practitioners, to guard females who may labour under inflammation, or excoriation of the upper portion of the vagina, against long confinement in bed to a particular position of the body; and as such excoriations are often incident to females during the first few weeks after parturition, it would be a good rule to advise a frequent change of position to guard them against the possibility of unnatural adhesions of the uterus and vagina, such as we have attempted to describe, and their consequences. The foregoing observations are designed chiefly for the junior and inexperienced members of the profession. They are presented in a form which it is believed will furnish some useful hints to young practitioners. And the hope is indulged that, as they are deduced from actual practice, during a long series of years, even our more experienced brethren may not find them altogether valueless.

PRINCE EDWARD C. H., Va., Oct. 30, 1841.